

10.0 CULTURAL RESOURCES

Section 10 presents an overview of cultural resources in the project area and vicinity and evaluates the potential for disturbance to known and unknown resource sites.

10.1 Environmental Setting/Affected Environment

The project is located within the Lake Davis watershed in the Plumas National Forest (PNF) on the west slope of the Sierra Nevada range of northern California. Lake Davis is a man-made reservoir located within Grizzly Valley at an elevation of 5,775 feet. The project area covers approximately 28,000 acres, including the Lake Davis watershed, Lake Davis, and Big Grizzly Creek from the Grizzly Valley Dam to the Middle Fork Feather River. The watershed includes Big Grizzly Creek and its tributaries. There is evidence of human occupation in the northern Sierra range spanning the past 8,000 years.

10.1.1 Prehistory

Development of an archaeological chronology for the Lake Tahoe area began in the 1950s. Heizer and Elasser (1953) defined two culture complexes, Kings Beach and Martis, dating back approximately 4,000 years. By the late 1970s, sequences were revised into seven phases spanning back to 6000 B.C. (Elston et al. 1977). These complexes included the Tahoe Reach, Spooner, Martis (Early, Middle, and Late) and Kings Beach (Early and Late) complexes.

- The Tahoe Reach Complex entails sporadic occupation of the area around 6000 B.C., and is characterized by large Parman projectile points. Other diagnostic artifacts include basalt bifaces, crescents, and scrapers, although cultural material from this period remains sparse.
- The Spooner Complex, 5000 B.C. to 2000 B.C., reflects the initial occupation of the high Sierra. The Spooner Complex is characterized by millingstones, unshaped pestles, and large basalt Pinto and Humbolt projectile points.
- The Martis Complex (Early, 2000 to 1500 B.C., Middle, 1500 to 500 B.C., and Late, 500 B.C. to A.D. 500) shows an increase in the use of basalt in projectile points, scrapers, and cutting tools. The Martis Complex is characterized by large Elko corner-notched, side-notched, and eared points. Pestles, mortars, and bedrock mortars appear in the Late Martis period. Evidence of circular houses with sunken floors appear during this period.
- The Kings Beach Complex (Early, A.D. 500 to 1200, and Late, A.D. 1200 to 1850) is characterized by small Desert Side-notched, Cottonwood Triangular, and Rosegate points. These small and light projectile points were made of chert, jasper, and obsidian, and indicate the introduction of the bow and arrow. The Kings Beach Complex saw the continued use of mortars and milling stones. Other artifacts include pine nut beads, olivella shell beads, steatite pipes, bone tubes, cordage, and basketry.

Diagnostic artifacts from previously recorded sites within the project area indicate occupations primarily from the Martis and Kings Beach cultural complexes. The majority of the tools and flakes are basalt, although chert, jasper, and obsidian artifacts are common. Large Elko corner-notched points from the Martis complex and Desert Side-notched and

Rosegate points from the Kings Beach Complex were identified. Milling stones and manos were more common than mortars.

10.1.2 Ethnography

Lake Davis is located within the traditional lands of the Maidu. There were permanent and seasonal Maidu villages in a series of mountain valleys between Lassen Peak and the Sierra Buttes and east to Honey Lake (Dixon 1905). The drainages of the Feather River approximate the extent of the Maidu people. The Maidu inhabited permanent village sites in Mountain Meadows, Big Meadows, Butt, American, Indian, and Genesee valleys. Other mountain valleys, such as Sierra, Red Clover, and Mohawk, were only occupied seasonally during warmer months (Riddell 1979). Lake Davis, which now occupies Grizzly Valley, is located between Red Clover, Sierra, and Mohawk valleys. Maidu likely occupied Grizzly Valley, but high snowfall would have limited them to seasonal habitation.

The Maudian language family is classified as California Penutian. Maidu settlement patterns consisted of village communities segregated by mountain valleys. Village communities were made up of three to five villages, consisting of approximately 35 individuals each. Village sites were typically located above the valley floor to escape the marshy conditions caused by snowmelt and drainages (Riddell 1979).

While acorns and fish were among the main staples of the Maidu diet, they also depended heavily on game as a food source. Bear and deer were killed in organized hunts (Dixon 1905:192). Elk, rabbit, squirrel, quail, and waterfowl were also important game. Meat was roasted over coals or baked in pits.

The Maidu were skilled weavers, creating baskets for carrying, storage, milling, water, and fish traps. Materials for the baskets were mainly roots from yellow pine, bear grass, and common brake (Riddell 1979).

The Maidu had little contact with Euro-Americans until after the discovery of gold in 1848, when the Maidu were decimated by the influx of gold seekers and the disease they carried with them. A population of approximately 4,000 in 1848 was reduced to little more than 200 in 1900 (Riddell 1979).

Another group, the Washoe, was traditionally centered around Lake Tahoe, but may have ventured into Maidu territory to gather resources. The Washoe was known to travel both east and west of their territory gathering acorns and red clover in the mountain valleys, and Sierra Valley was firmly within Washoe territory (D'Azevedo 1986).

10.1.3 History

Historical accounts within Grizzly Valley begin with African-American mountain man Jim Beckwourth and his survey for a route from Reno to Sacramento Valley in 1850. The Beckwourth Trail brought emigrants through the area on their way to the gold fields of the Sacramento Valley. Early industry in the area included dairies, cattle, and sheep ranching. The turn of the century saw timber take over as the chief industry. Railroads brought better access for the local commodities. By the late 1960s, Grizzly Valley Dam had created Lake Davis, and recreation now drives the area economy.

10.1.3.1 Beckwourth Emigrant Trail

Jim Beckwourth opened a wagon road in 1851, connecting the California Trail from Reno to Bidwell's Bar and on to the Sacramento Valley. Between 1851 and 1854, 1,200 emigrants used the trail (Young 2003:59). The trail was the first to open wagon access to American Valley from the east. Prior to Beckwourth's wagon road, northern mines could only be supplied by pack mules from Bidwell's Bar. By 1860, other routes provided easier access to the Sacramento Valley, and much of the Beckwourth Emigrant Trail was used primarily as a stage and freight road (Hammond 1994).

The trail split off the California Trail at Sparks, Nevada, and continued northwest through Long Valley. It then turned west over Beckwourth Pass and through Sierra Valley to Big Grizzly Creek and northwest through Grizzly Valley. The trail continued to Emigrant Creek and turned southwest over Grizzly Ridge. The trail then passed through American and Meadow valleys ending at Bidwell's Bar, now under Lake Oroville. Much of the trail is now covered by graded or paved roads. Traces of the trail can be seen in Grizzly Valley.

10.1.3.2 Agriculture

The Grizzly Valley area saw many small dairies opened in the 1860s to supply commodities to Nevada Comstock communities. Cheese and butter were transported by wagon to Reno and Virginia City. By the 1880s, the focus began changing to cattle ranching and by the turn of the century seasonal cattle drives from Plumas County to Reno were common. Early 20th century sheepherders have left behind arborglyphs on aspen trees, reflecting an era of sheep ranching in the area.

10.1.3.3 Mining

Gold mining did take place in Grizzly Valley as early as 1851 (Fariss and Smith 1882). While gold was sporadically mined in the area, it was copper that was the area's most important mineral. The Walker Mine, located approximately seven miles west of Lake Davis, produced \$23 million worth of copper from the early 1900s until closing in 1941 (Young 2003: 43–45). Initially, ore from the Walker Mine was brought out via wagons or trucks through Grizzly Valley to the railroad near the town of Beckwourth in Sierra Valley. In 1919, an aerial tramline was completed and ore was then transported directly west of the mine across Grizzly Ridge to a rail connection at Spring Garden.

10.1.3.4 Timber and Railroads

The completion of the Western Pacific Railroad in 1909 brought with it the development of the logging industry in Plumas County. This railway was an important route up the Feather River Canyon connecting the northern Sierra with the Sacramento Valley. The Feather River Lumber Company was formed in 1905, and by 1912, owned large tracts of Grizzly Valley (Keddie 1912). A railway mainline, spurs, sawmills, and camps came and went. Railroad logging operations took place in Grizzly Valley throughout the 1920s and 1930s and ended by 1940. Portions of the old logging railroad mainline are now converted to Road 24N10 on the west side of Lake Davis.

10.1.4 Regulatory Environment

10.1.4.1 Federal

Under the National Environmental Policy Act (NEPA), federal agencies must take into account potential effects to historic resources, or those resources that are eligible for the National Register of Historic Places (NRHP), before an undertaking may be approved. Furthermore, Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, requires that any federal or federally-assisted undertaking, or any undertaking requiring federal licensing or permitting, consider the effect of the action on historic properties listed in or eligible for the NRHP. Under 36 CFR Part 800.8, federal agencies are specifically encouraged to coordinate compliance with Section 106 and the NEPA process.

The NRHP, created under the NHPA, is the federal list of historic, archaeological, and cultural resources worthy of preservation. Resources listed in the NHRP include districts, sites, buildings, structures, and objects that are significant in American history, prehistory, architecture, archaeology, engineering, and culture. The NRHP is maintained and expanded by the National Park Service on behalf of the Secretary of the Interior. The Office of Historic Preservation (in Sacramento, California) administers the statewide NRHP program under the direction of the State Historic Preservation Officer (SHPO). To guide the selection of properties included in the NRHP, the National Park Service has developed the NRHP Criteria for Evaluation. The criteria are standards by which every property that is nominated to the NRHP is judged. The quality of significance in American history, architecture, archaeology, and culture is possible in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association, and meet one of the following criteria:

- Criterion A: are associated with events that have made a significant contribution to the broad patterns of our history; or
- Criterion B: are associated with the lives of persons significant in our past; or
- Criterion C: embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D: has yielded, or may be likely to yield, information important in prehistory or history (36 CFR Part 60).

Consultation with the SHPO for this proposal is in progress. Because all effects of dewatering the lake can not be assessed until after the lake has been drawn down, a Memorandum of Agreement (MOA) for ongoing consultation is being developed. Affect to cultural resources would be monitored until the reservoir refills, with appropriate actions identified for various outcomes. No decision on this project will be made by the USFS until the SHPO accepts the MOA.

10.1.4.2 State

State regulatory compliance in relation to cultural resources is governed by the California Environmental Quality Act (CEQA). The CEQA guidelines define a significant cultural resource as “a resource listed in or eligible for listing on the California Register of Historical Resources (CRHR)” (Public Resources Code section 5024.1). Measures must be considered to reduce or control impacts to identified historical resources affected by a proposed project.

The lead agency can determine that a resource is potentially eligible for listing in the CRHR for the purposes of determining whether a significant impact will occur. Even if the resource is not listed in the CRHR and is not included in a local register of historical resources that does not preclude an agency from determining whether it may be a historical resource for the purposes of CEQA. A historical resource may be eligible for inclusion in the CRHR if it:

- is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- is associated with the lives of persons important in our past;
- embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values; or
- has yielded, or may be likely to yield, information important to prehistory or history.

In addition, CEQA also distinguishes between two classes of archaeological resources: archaeological sites that meet the definition of a historical resource as above, and “unique archaeological resources.” An archaeological resource is considered “unique” if it:

- is associated with an event or person of recognized significance in California or American history or of recognized scientific importance in prehistory;
- can provide information that is of demonstrable public interest and is useful in addressing scientifically consequential and reasonable research questions;
- has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind;
- is at least 100 years old and possesses substantial stratigraphic integrity; or
- involves important research questions that historical research has shown can be answered only with archaeological methods (PRC 21083.2).

The CEQA Guidelines (14 CCR 15064.5[c]) specify that the lead agency must treat an archaeological resource, that meets the definition of a historical resource, according to the provisions of PRC 21084.1, 14 CCR 15064.5, and 14 CCR 15126.4. If an archaeological resource does not meet the definition of a historical resource, but does meet the definition of a unique archaeological resource, then the lead agency is obligated to treat the resource according to the provisions of PRC 21083.2 (14 CCR 15064.5[c][3]).

10.2 Environmental Impacts and Consequences

10.2.1 Evaluation Criteria and Environmental Concerns

An adverse impact on cultural resources was considered significant and would require mitigation if project construction or operation would result in an unresolvable adverse impact on the characteristics that contribute to the eligibility of a historic or prehistoric property for listing in the NRHP or the CRHR. The following adverse impacts to cultural resources are included in the CEQA environmental checklist:

1. Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5;
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5;
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
4. Disturb any human remains, including those interred outside of formal cemeteries.

Environmental concerns to be evaluated are impacts to potential cultural resource sites from ground disturbance, erosion of the exposed lakebed, and looting of any exposed resources.

10.2.2 Evaluation Methods and Assumptions

Staff at the Northeast Information Center (NEIC) of the California Historical Resources Information System (CHRIS) conducted a record search for the project area on March 7, 2006. The search consisted of a review of:

- NEIC databases of archaeological sites and studies within a quarter mile of the Lake Davis project area;
- National Register of Historic Places (NRHP), Directory of Determinations of Eligibility, California (National Park Service 1988);
- California Register of Historic Resources (CRHR) (2005);
- California Historical Landmarks (1996);
- California Points of Historical Interest (State of California 1992);
- Handbook of North American Indians, Vol. 8, California (1978);
- Historic Spots in California (1966);
- Historic Property Data File for Plumas County (2005); and
- California Inventory of Historical Resources (1976).

According to the NEIC, 53 prehistoric sites and 28 historic sites are located within the project area and vicinity. Records also showed that 24 previous archaeological surveys have been conducted within the project area and vicinity.

U.S. Forest Service (USFS) records located at the PNF office in Blairsden, California, were examined on March 23–24, 2006. Forest service survey maps at the Beckwourth Ranger Station indicated that all areas above the current reservoir level within the project area have been surveyed except for approximately 300 acres on Big Grizzly Creek west of Lake Davis.

Additional information was gathered on February 16, 2006, from the Williams House Museum in Portola, California, and the Plumas County Museum in Quincy, California, pertaining to local history.

The Oregon-California Trail Association has identified the route of the Beckwourth Trail, which runs through Grizzly Valley. The Beckwourth Trail, a branch of the Truckee Route of the California Trail, is an important aspect of 19th-century California history.

Information from these several different sources indicates that the Grizzly Valley area has had human occupation since prehistoric times.

The entire Grizzly Valley watershed is the area of potential effect (APE) for the Lake Davis Pike Eradication Project. Direct impact from the project within the APE are of special concern for cultural resources.. Those areas of potential direct effect (APDE) include staging areas, storage areas, tributary access areas, and boat ramps at three reservoir access points into Lake Davis. Once the APDE are chosen, each area shall be surveyed prior to any work. Any cultural resources will be identified and evaluated under Section 106 guidelines (36 CFR 800).

10.2.2.1 Forest Closure

Forest Closure 1 (Section 2.3.8.1) would be in effect as long as the reservoir capacity was below 45,000 acre-feet, one to two years. People would still be able to drive on forest development roads and parking lots, use the campgrounds, picnic areas, and boat ramps, as well as walk down to the 45,000 acre-foot shoreline. People would not be allowed into the exposed reservoir bed below the 45,000 acre-foot shoreline.

An exception to the closure is part of every project alternative (except Alternative D which has no drawdown). The exception would allow public access along the southeast shore of the reservoir, between the southern loop of Grizzly Campground to the boat ramp at Honker Cove. Between these points, people could walk down to the shore of the water, and could trailer boats to the water's edge, unless mud prohibited vehicle access. Human use by boating and swimming in and on the waters of the reservoir would not be affected by the closure.

The closure would be implemented by signing, public notification, and enforcement. Temporary signs and carsonite markers would be installed along roads, parking areas, and at the heads of access trails leading to the reservoir. Kiosks around the reservoir would be posted with notices of the closure. The public would be notified through newspaper articles, radio announcements, informational brochures, web-sites, campground hosts, and coordination with local communication points. The California Department of Fish and Game (DFG) and USFS law enforcement personnel would enforce the closure.

10.2.3 No Project/No Action

Existing management practices, including pike population control and pike containment within the reservoir by managing operations to avoid spills, would be continued under the No Project alternative. No Project would involve no drawdown of the reservoir or chemical treatment of the reservoir and tributaries. No Project would have no adverse impact on cultural resources compared to existing conditions.

10.2.4 Proposed Project/Proposed Action – 15,000 Acre-Feet (Plus Treatment)

10.2.4.1 Potential for Ground Disturbance Affecting Cultural Resources

Areas of potential direct effect include staging areas, storage areas, and tributary access areas to Lake Davis. Ground disturbance from activities in these areas could have adverse effects on cultural resources that may be present.

Impact CR-1: Proposed Project activities in staging areas, storage areas, and tributary access areas could affect cultural resources through ground disturbance. The impact from ground disturbance is significant but mitigable.

Mitigation CR-1: Ground disturbance shall be mitigated by avoidance. Areas to be disturbed will be surveyed prior to work in areas of potential direct effect. Any identified resources will be marked for avoidance using orange fencing and/or tape with a 10 to 15 foot buffer to protect the site from any associated activities during the treatment period, and crews will be informed of the resource.

Significance After Mitigation: This measure is sufficient to reduce the impact to less than significant.

Impact CR-2: Extension of the boat ramp in order to allow boat access to Lake Davis as reservoir levels drop could affect cultural resources through ground disturbance. The impact from ground disturbance is significant but mitigable.

Mitigation CR-2: Ground disturbance from boat ramp extension shall be mitigated by avoidance. There are three potential boat ramps for reservoir access. Once a boat ramp for reservoir access has been chosen, a qualified archaeologist shall survey any areas impacted by ramp extension. If cultural resources that are eligible for the National Register could be impacted by ramp extension, an alternate access ramp will be used. If an alternate ramp is not available, mitigation of a National Register eligible site will be determined by consultation with the DFG, the USFS, the State Historic Preservation Officer, and appropriate Native American tribes and may include compensation measures such as full investigation of uncovered sites.

Significance After Mitigation: This measure is sufficient to reduce the impact to less than significant.

10.2.4.2 Potential for Erosion from Reservoir Dewatering, Stream Movement, and Weather

As reservoir levels drop, potential for erosion exists. Slow dewatering of the reservoir could impact potential sites through wave action; streams flowing into the reservoir could change course as reservoir levels drop, impacting areas outside previous stream beds; and previously submerged areas with no vegetation could be susceptible to erosion from weather.

Impact CR-3: The dewatering of the reservoir could potentially cause erosion to potential cultural resource sites. The impact from erosion is significant but mitigable.

Mitigation CR-3: Erosion shall be mitigated by monitoring, followed by agency consultations and appropriate actions. Any previously recorded sites will be located and regularly monitored during the dewatering process by a qualified archaeologist to determine if erosion due to reservoir dewatering, stream movements, or weather is impacting the sites. If cultural resources that are eligible for the National Register were being impacted by erosion, mitigation will be determined by consultation with the DFG, the USFS, the State Historic Preservation Officer, and appropriate Native American tribes and may include compensation measures such as full investigation of uncovered sites.

Significance After Mitigation: This measure is sufficient to reduce the impact to less than significant.

10.2.4.3 Potential for Looting and Vandalism

The forest closure described in Section 10.2.2.1 would minimize the potential for looting and vandalism of potentially exposed cultural resources.

Impact CR-4: The effect on cultural resources from looting and vandalism of resources potentially located in the exposed lakebed is less than significant, due to enforcement of the forest closure.

Mitigation CR-4: No mitigation is required. However, the drawdown presents an opportunity to research and study exposed areas for potential resources; which, if present, could be documented.

10.2.5 Alternative A – 15,000 Acre-Feet (Plus Treatment Including Powder)

Alternative A is the drawdown of Lake Davis to 15,000 acre-feet and treatment of the reservoir with powdered rotenone and the tributaries with liquid rotenone to eradicate the invasive non-native pike population.

The potential impacts and mitigation would be the same as the Proposed Project/Proposed Action.

10.2.6 Alternative B – 5,000 Acre-Feet (Plus Treatment)

Alternative B is the drawdown of Lake Davis to 5,000 acre-feet and treatment of the reservoir and its tributaries with rotenone to eradicate the invasive non-native pike population.

The type of potential impacts and mitigation would be the same as the Proposed Project/Proposed Action. However, the potential for erosion impacts is more severe. With the lower reservoir elevation, a greater number of potential sites could be adversely impacted.

10.2.7 Alternative C – 35,000 Acre-Feet (Plus Treatment)

Alternative C is the drawdown of Lake Davis to 35,000 acre-feet and treatment of the reservoir and its tributaries with rotenone to eradicate the invasive non-native pike population.

The potential impacts and mitigation would be the same as the Proposed Project/Proposed Action.

10.2.8 Alternative D – 48,000 Acre-Feet (Plus Treatment)

Alternative D is the maintenance of Lake Davis to 48,000 acre-feet and treatment of the reservoir and its tributaries with rotenone to eradicate the invasive non-native pike population.

The potential impact CR-1 and the associated mitigation would be the same as the Proposed Project/Proposed Action. There would be no impact from CR-2, because the existing ramps already access the reservoir to the 48,000 acre-feet level. Potential impact CR-3 would not be an issue, because reservoir levels would not fall below historic reservoir levels. Under this alternative, no forest closure of the lakebed would take effect, but Forest Closure 2 to protect human health and safety would be in effect.

10.2.9 Alternative E – Dewater Reservoir and Tributaries (No Chemical Treatment)

Alternative E is the complete dewatering of the reservoir and tributaries to eradicate the invasive non-native pike population. The reservoir and tributaries would be drained using the existing reservoir outlet and large capacity pumps.

The potential impacts and mitigation would be the same as the Proposed Project/Proposed Action. Areas associated with the pumps and pumping activities would be included in potential impact CR-1. Although impacts and mitigation for Alternative E would be the same as the Proposed Project, the extent of ground disturbance and erosion would be much greater because of the increased scope inherent in the complete dewatering of the reservoir and tributaries.

Alternative E includes the installation of cofferdams, pipes, and pumps to dewater the tributaries. This disturbance would include the construction of approximately 10 cofferdams per mile over an estimated 30 miles of stream. There would be added disturbance from the equipment required to deliver the materials, pipe, and pumps along the tributaries. Ground disturbance would be significantly greater in the lakebed as well, from equipment, pipes, and pumps required to completely dewater the reservoir.

10.2.10 Cumulative Impacts

Cumulative impacts within the project area are evaluated by considering the impacts of other past, present, and future projects. These projects are considered as a sum to determine if significant impacts could occur when the projects are combined, that may not be identified during the impact analysis of the proposed project alone. To determine if there would be cumulative impacts for cultural resources, the following past, present, and future projects, all located within the Lake Davis Pike Eradication Project area, were considered:

- **Freeman Project.** The Freeman Project is a forest management project that includes reducing hazardous fuels, improving forest health, improving bald eagle habitat, and improving aspen stands. The project is located west of Lake Davis up to Grizzly Ridge and covers approximately 6,000 acres.
- **Grizzly Ranch Development Project.** The Grizzly Ranch Development Project is a single-family residential community with an integrated golf course development. The project is located southeast of Lake Davis, approximately 1.5 north of Highway 70, and covers 1,042 acres.
- **Forest Service Road 24N10 Chip Seal Project.** The 24N10 Chip Seal Project is a road improvement project that involves chip sealing Forest Service Road 24N10 from Lake Davis Road to Camp 5 boat launch. The project is located west of Lake Davis and covers approximately 2.5 miles.
- **USFS Timber and Salvage Sales.** Timber and salvage sales are ongoing forest management practices within the PNF.

Possible impacts to cultural resources in the project area from the Proposed Project and alternatives are ground disturbance, erosion, and looting. None of the other projects considered were determined to directly or indirectly create or increase impacts within the Lake Davis project area from ground disturbance (i.e., road building or excavation), activities that would create or increase the chance of erosion, or by increasing the chances of looting and result in cumulatively and considerable impacts. Conversely, possible cultural resources impacts from the Proposed Project or any of the alternatives would have no foreseeable incremental effects when combined with any of the other considered projects. Therefore, no cumulative impacts are anticipated as a result of the Lake Davis Pike Eradication Project and other projects within the project area and vicinity.

10.2.11 Environmental Impacts Summary

This impact assessment for cultural resources is summarized in Table 10.2-1. The No Project alternative would have no impacts on cultural resources in the project area. The Proposed Project and Alternatives A through D would have similar impacts for ground disturbance from project activities. Ground disturbance impacts from Alternative E would be significantly greater. Alternative E includes the installation of cofferdams, pipes, and pumps to dewater the tributaries. This disturbance would include the construction of approximately 10 cofferdams per mile over an estimated 30 miles of stream. There would be added disturbance from the equipment required to deliver the materials, pipe, and pumps.

Disturbance would be significantly greater in the lakebed as well, from equipment, pipes, and pumps required to completely dewater the reservoir.

Impacts from ramp extension and erosion would all increase the more the reservoir was drawn down. Alternative E would have the most substantial impact from ramp extension and erosion, followed by Alternative B, the Proposed Action and Alternative A, and Alternative C. Alternative D would have (1) no impact from ramp extension, because existing ramps already access the reservoir at 48,000; and (2) no impact of erosion from the project, because the water level would not fall below historic reservoir levels.

Impacts from looting and vandalism that might occur during exposure of the lakebed from the Proposed Action and Alternatives A, B, C, and E would all be less than significant due to enforcement of the Forest Closure 1. Alternative D would have no impact from looting and vandalism from the project, because the water level would not fall below historic reservoir levels.

Table 10.2-1. Summary Comparison of Impacts of Alternatives

Affected Resource and Area of Potential Impact	Alternative						
	No Project Compared to Existing Conditions	Proposed Action	A	B	C	D	E
Cultural Resources							
1. Ground Disturbance in Staging Areas	N	SM, A	SM, A	SM, A	SM, A	SM, A	SM, A
2. Ground Disturbance from Ramp Extension	N	SM, A	SM, A	SM, A	SM, A	N	SM, A
3. Erosion from Reservoir Drawdown	N	SM, A	SM, A	SM, A	SM, A	N	SM, A
4. Looting and Vandalism	N	LS, A	LS, A	LS, A	LS, A	N	LS, A

KEY:

A = Adverse Impact (NEPA)

B = Beneficial Impact (NEPA)

LS = Less than Significant Impact (CEQA)

N = No Impact (CEQA, NEPA)

SM = Significant but Mitigable Impact (CEQA)

SU = Significant and Unavoidable Impact (CEQA)

10.2.12 Monitoring

Monitoring of any known sites should be conducted to confirm the effectiveness of the forest closure program.